

T-LINK HINGE MECHANISM

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a Divisional Application of U.S. patent application Ser. No. 16,545,743 filed Aug. 20, 2019 which is a Continuation of U.S. patent application Ser. No. 15/879,007, titled “TABLE TOP AND SKIRT WITH FOLDABLE LEGS” filed on Jan. 24, 2018 (now U.S. Pat. No. 10,390,609 issued on Aug. 27, 2019) and which claims priority from U.S. Provisional Patent Application No. 62/449,818 filed on Jan. 24, 2017 and titled “OUTDOOR EQUIPMENT 2016”, all of which are incorporated fully herein by reference.

TECHNICAL FIELD

[0002] The present invention relates to hinge mechanisms, and more particularly, relates to foldable hinges useful for foldably connecting together various items and objects.

BACKGROUND INFORMATION

[0003] A large portion of the population enjoy camping and other outdoor activities. When engaged in these activities, however, many people enjoy some of the comforts of home. This includes a table or other surface which can be used to prepare food, serve food or place various objects including cook stoves and the like for use during outdoor activities.

[0004] Although individuals engaged in the activities enjoy such comforts of home, weight, space and collapsibility is still an important feature. If the table is not able to be folded and stored in a small area and if it is too heavy, its usefulness will be lost to campers and outdoor enthusiasts.

[0005] Accordingly, what is needed is a hinge mechanism which allows any device, such as a table, to be folded for purposes of packing it to the outdoor area but which can be unfolded to form a useable item or object.

SUMMARY

[0006] The present disclosure features a T-link hinge for hingeably connecting first and second members. The T-link hinge comprises a link portion having a T-shaped cross-section. The link portion comprises a top region and a bottom region, wherein the top region has a width greater than a width of the bottom region. The link portion has first and second ends.

[0007] In one embodiment, the link portion comprises first and second thru holes formed in the bottom region of the link portion adjacent each the respective first and second ends of the link portion.

[0008] In another embodiment, each of the first and second members include a T-shaped link portion receiving region comprising a top region and a bottom region. The top region has a width greater than a width of the bottom region.

[0009] In one embodiment, each of the first and second members including thru holes extending at least partially into the bottom region of each of the T-shaped link portion receiving region of the first and second members.

[0010] In an assembled configuration of the link portion and the first and second members, the thru holes formed on the first and second members axially align with the pair of thru holes in the link portion.

[0011] The T-link hinge further comprises first and second pins, configured for being disposed in the axially aligned thru holes in the bottom region of each of the T-shaped link portion receiving region of the first and second members and the first and second ends of the link portion.

[0012] The present disclosure also features an alternate embodiment of the T-link hinge. The T-link hinge comprises a link portion having a T-shaped cross-section comprising a top portion and a bottom portion. The top portion has a width greater than a width the bottom portion. The link portion has first and second ends, wherein the link portion comprises a pair of thru holes formed on the link portion adjacent each the first and second ends.

[0013] In one embodiment, the T-link hinge further comprises first and second panel mount portions. The first panel mount portion configured for being pivotally connected to the first end of the link portion, and the second panel mount portion is configured for being pivotally connected to the second end of the link portion. The first and second panel portions are configured to be fastened to first and second members for hingeably connecting the first and second members.

[0014] In another embodiment, the first and second panel mount portions include thru holes. In an assembled configuration of the link portion and the first and second panel mount portions, the thru holes formed on the first and second panel mount portions axially align with the pair of thru holes on the link portion.

[0015] The T-link hinge further comprises first and second pins configured for being disposed in the axially aligned thru holes of the first and second panel mount portions and the first and second ends of the link portion.

[0016] In another embodiment, the first and second panel mount portions comprise a top flange portion having a pair of mounting holes formed thereon; and a pair of protrusions extending from a bottom surface of the top flange, wherein the thru holes are disposed in the pair of protrusion. The pair of protrusions are flush fitted on the first and second members to be hingeably connected together.

BRIEF DESCRIPTION OF THE DRAWINGS

[0017] These and other features and advantages of the present invention will be better understood by reading the following detailed description, taken together with the drawings wherein:

[0018] FIGS. 1 through 3 show a T-link hinge useful in a table or other device according to the present invention;

[0019] FIGS. 4 through 7 illustrate the operation of a T-link hinge according to one embodiment of the present invention;

[0020] FIGS. 8 through 10 are more detailed close-up and cross-sectional views of the T link hinge according to the invention;

[0021] FIGS. 11A and 11B are exploded views of a T link hinge and mounting area according to one feature of the present invention; and FIGS. 12A thru 12C are exploded views of the T link hinge according to the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0022] The present invention features a T-link style hinge 122, FIG. 1 that may be utilized for a tabletop or other